

Based on Form PTO-1449  
(3/90)

ATTY. DOCKET NO.

670001-2002.4

SERIAL NO.

09/804,980

## LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

ANDERSEN ET AL.

FILING DATE

March 13, 2001

GROUP

1645

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT NUMBER | DATE     | NAME            | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|----|-----------------|----------|-----------------|-------|----------|-------------------------------|
| <i>MS</i>           | AA | 4 891 315       | 01/1990  | Watson et al.   |       |          |                               |
|                     | AB | 4 952 395       | 08/1990  | Shinnick et al. |       |          |                               |
|                     | AC | 4 976 958       | 12/1990  | Shinnick et al. |       |          |                               |
|                     | AD | 5 026 546       | 06/1991  | Hilgers et al.  |       |          |                               |
|                     | AE | 5 330 754       | 07/1994  | Kapoor et al.   |       |          |                               |
|                     | AF | 5 559 011       | 09/1996  | Kapoor et al.   |       |          |                               |
|                     | AG | 4 683 578       | 07/28/87 | Betts et al.    |       |          |                               |

**RECEIVED**  
FEB 06 2003  
TECH CENTER 1600/2900

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT NUMBER | DATE     | COUNTRY | CLASS | SUBCLASS | TRANSLATION |    |
|--|----|-----------------|----------|---------|-------|----------|-------------|----|
|  |    |                 |          |         |       |          | YES         | NO |
|  | AH | WO 97/09428     | 3/13/97  | WIPO    |       |          |             |    |
|  | AI | WO 97/09429     | 3/13/97  | WIPO    |       |          |             |    |
|  | AJ | WO 95/01441     | 1/12/95  | WIPO    |       |          |             |    |
|  | AK | WO 96/37219     | 11/28/96 | WIPO    |       |          |             |    |
|  | AL | WO 92 14823     | 09/1992  | WIPO    |       |          |             |    |
|  | AM | WO 98 53075     | 11/26/98 | WIPO    |       |          |             |    |
|  | AN | WO 98 53076     | 11/26/98 | WIPO    |       |          |             |    |
|  | AO | WO 98 44119     | 10/08/98 | WIPO    |       |          |             |    |
|  | AP | EP 0 734 132    | 09/25/96 | EUROPE  |       |          |             |    |
|  | AQ | EP 0 729 250    | 08/28/96 | EUROPE  |       |          |             |    |
|  | AR | EP 0 869 649    | 10/07/98 | EUROPE  |       |          |             |    |
|  | AS | DE 195 40 250   | 02/20/97 | GERMANY |       |          |             |    |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

|    |  |
|----|--|
| AT | Borodovsky et al., Computers Chem., vol. 17, pp. 123-133 |
| AU | Brown, EMBL Sequence database                            |

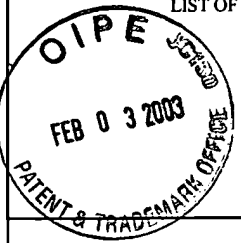

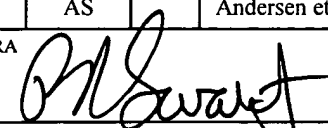
EXAMINER

*MSwamy*

DATE CONSIDERED

6-30-03

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

|   |    |   |   |  |       |                                     |                               |  |
|---|----|---|---|--|-------|-------------------------------------|-------------------------------|--|
| Based on Form PTO-1449<br>(3/90)  |    |   |   | ATTY. DOCKET NO.<br><br><b>670001-2002.4</b>                                   |       | SERIAL NO.<br><br><b>09/804,980</b> |                               |  |
| <div style="text-align: center;">  </div> <div style="text-align: center;">           LIST OF REFERENCES CITED BY APPLICANT<br/>           (Use several sheets if necessary)         </div> |    |   |   | APPLICANT<br><br><div style="text-align: center;"><b>ANDERSEN ET AL.</b></div> |       |                                     |                               |  |
|   |    |   |   | FILING DATE<br><br><b>March 13, 2001</b>                                       |       | GROUP<br><br><b>1645</b>            |                               |  |
|   |    |   |   |  |       |                                     |                               |  |
| U.S. PATENT DOCUMENTS   |    |   |   |  |       |                                     |                               |  |
| EXAMINER<br>INITIAL   |    | DOCUMENT NUMBER   | DATE  | NAME   | CLASS | SUBCLASS                            | FILING DATE<br>IF APPROPRIATE |  |
|   | AA |   |   |  |       |                                     |                               |  |
| FOREIGN PATENT DOCUMENTS  |    |   |   |  |       |                                     |                               |  |
|   |    | DOCUMENT NUMBER   | DATE  | COUNTRY  | CLASS | SUBCLASS                            | TRANSLATION                   |  |
|   |    |   |   |  |       |                                     | YES NO                        |  |
|   | AB |   |   |  |       |                                     |                               |  |
| OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)  |    |   |   |  |       |                                     |                               |  |
|   | AC |   | Harboe et al., Infect. Immun. vol. 64, pp. 16-22                    |  |       |                                     |                               |  |
|   | AD |   | Von Heijne et al., J. Mol. Biol., vol. 173, pp. 243-251             |  |       |                                     |                               |  |
|   | AE |   | Hochstrasser et al., Annal Biochem., vol. 173, pp. 424-435          |  |       |                                     |                               |  |
|   | AF |   | Kohler et al., Nature, vol. 256, pp. 495-497                        |  |       |                                     |                               |  |
|   | AG |   | Li et al., Infect. Immun., vol. 61, pp. 1730-1734                   |  |       |                                     |                               |  |
|   | AH |   | Lindblad et al., Infect. Immun., vol. 65, pp. 623-629               |  |       |                                     |                               |  |
|   | AI |   | Mahairs et al., J. Bacteriol., vol. 178, pp. 1274-1282              |  |       |                                     |                               |  |
|   | AJ |   | Nagai et al., Infect. Immun., vol. 59, pp. 372-382                  |  |       |                                     |                               |  |
|   | AK |   | Oettinger et al., Infect. Immun., vol. 62, pp. 2058-2064            |  |       |                                     |                               |  |
|   | AL |   | Ohara et al., Scand. J. Immunol., vol. 41, pp. 433-442              |  |       |                                     |                               |  |
|   | AM |   | Pal et al., Infect. Immun., vol. 60, pp. 4781-92                    |  |       |                                     |                               |  |
|   | AN |   | Pearson et al., Proc. Natl. Acad. Sci., USA, vol. 85, pp. 2444-2448 |  |       |                                     |                               |  |
|   | AO |   | Ploug et al., Anal Biochem., vol. 181, pp. 33-39                    |  |       |                                     |                               |  |
|   | AP |   | Porath et al., FEBS Lett., vol. 185, pp. 306-310                    |  |       |                                     |                               |  |
|   | AQ |   | Roberts et al., Immunol., vol. 85, pp. 502-508                      |  |       |                                     |                               |  |
| AR  |    | Rosenkrands et al., Infect. Immun., vol. 66, no. 6, pp. 2728-2735 |   |  |       |                                     |                               |  |
| AS  |    | Andersen et al., J. Immunol. vol. 154, pp. 3359-72                |   |  |       |                                     |                               |  |
| EXAMINER<br><br>   |    |   |   | DATE CONSIDERED<br><br><b>6-30-03</b>  |       |                                     |                               |  |
| * EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.                                  |    |   |   |  |       |                                     |                               |  |

Based on Form PTO-1449  
(3/90)

ATTY. DOCKET NO.

670001-2002.4

SERIAL NO.

09/804,980

## LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

ANDERSEN ET AL.

FILING DATE

March 13, 2001

GROUP

1645

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
| AA                  |                 |      |      |       |          |                               |

## FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |
|-----------------|------|---------|-------|----------|-------------|
|                 |      |         |       |          | YES NO      |
| AB              |      |         |       |          |             |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

|    |   |
|----|---|
| AC | Rosenkrands et al., EMBL: Y12820  |
| AD | Sorensen et al., Infect. Immun., vol. 63, pp. 1710-1717   |
| AE | Theisen et al., Clinical and Diagnostic Laboratory Immunology, vol. 2, pp. 30-34  |
| AF | Valdes-Stauber et al., Appl. Environ. Microbiol., vol. 60, pp. 3809-3814  |
| AG | Valdes-Stauber et al., Appl. Environ. Microbiol., vol. 62, no 4, pp. 1283-1286  |
| AH | Williams, Science, 272:27   |
| AI | Young et al., Proc. Natl. Acad. Sci. USA, vol. 82, pp. 2583-2587  |
| AJ | Crabtree et al., EMBL Sequence database   |
| AK | Van Dyke et al., Gene, pp. 99-104   |
| AL | Gosselin et al., J. Immunol., vol. 149, pp. 3477-3481   |
| AM | XP002092185 EMBL Sequence   |
| AN | Andersen et al., J. Immunol. Methods, vol. 161, pp. 29-39   |
| AO | Andersen et al., Infect. Immun., vol. 60, pp. 2317-2323   |
| AP | Rosenkrands et al., EMBL: 007812  |
| AQ | Wiegshauss, E.H., et al. "Evaluation of the Protective Protency of New Tuberculosis Vaccines", Reviews of Infectious Diseases, Vol. 11, supplement 2, pages S484-S490, March 1989 |
| AR | Orme, I.M., "New Vaccines against Tuberculosis", Infectious Disease Clinic of North America, Vol. 13, No. 1, pages 169-185, March 1999  |
| AS | Andersen, Infect. Immun. vol. 62, pp. 2536-44   |
| AT | Barkholt et al., Anal. Biochem., vol. 177, pp. 318-322  |

EXAMINER

DATE CONSIDERED

6-30-03

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

RECEIVED

FEB 06 2003

TECH CENTER 1800/2900

Sheet 4 of 6

Based on Form PTO-1449  
(3/90)

ATTY. DOCKET NO.

670001-2002.4

SERIAL NO.

09/804,980

## LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

ANDERSEN ET AL.

FILING DATE

March 13, 2001

GROUP

1645

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
| AA                  |                 |      |      |       |          |                               |

## FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |
|-----------------|------|---------|-------|----------|-------------|
|                 |      |         |       |          | YES NO      |
| AB              |      |         |       |          |             |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

|    |  |
|----|--|
| AC | SCANDINAVIAN JOURNAL OF IMMUNOLOGY vol. 36, 1992 pages 823 - 831 P. ANDERSEN ET AL. 'Identification of immunodominant antigens during infection with Mycobacterium tuberculosis'   |
| AD | INFECTION AND IMMUNITY vol. 61, no. 3, March 1993, WASHINGTON US pages 844 - 851 PETER ANDERSEN ET AL. 'Specificity of a protective memory immune response against Mycobacterium tuberculosis'   |
| AE | INFECTION AND IMMUNITY vol. 59, no. 4, April 1991, WASHINGTON US pages 1558 - 1563 PETER ANDERSEN ET AL. 'T-cell proliferative response to antigens secreted by Mycobacterium tuberculosis' cited in the application                     |
| AF | INFECTION AND IMMUNITY vol. 60, no. 7, July 1992, WASHINGTON US pages 2880 - 2886 KRIS HUYGEN ET AL. 'Spleen cell cytokine secretion in Mycobacterium bovis BCG-infected mice'   |
| AG | INFECTION AND IMMUNITY vol. 59, no. 6, June 1991, WASHINGTON US pages 1905 - 1910 PETER ANDERSEN ET AL. 'Proteins released from Mycobacterium tuberculosis during growth' cited in the application                                       |
| AH | INFECTION AND IMMUNITY vol. 56, no. 12, December 1988, WASHINGTON US pages 3046 - 3051 CHRISTIANE ABOU-ZEID ET AL. 'Characterization of fibronectin-binding antigens released by Mycobacterium tuberculosis and Mycobacterium bovis BCG' |
| AI | INFECTION AND IMMUNITY vol. 57, no. 10, October 1989, WASHINGTON US pages 3123 - 3130 MARTINE BORREMANS ET AL. 'Cloning sequence determination, and expression of a 32-kilodalton-protein gene of Mycobacterium tuberculosis'            |
| AJ | INFECTION AND IMMUNITY vol. 62, no. 6, June 1994, WASHINGTON US pages 2536 - 2544 PETER ANDERSEN 'Effective vaccination of mice against Mycobacterium tuberculosis infection with a soluble mixture of secreted mycobacterial proteins'  |
| AK | MORIYAMA S ET AL.: "DIGITAL TRANSMISSION OF HIGH BIT RATE SIGNALS USING 16DAPSK-OFDM MODULATION SCHEME" IEEE TRANSACTIONS ON BROADCASTING, March 1998, vol. 44, no. 1, pages 115-122, XP002105431  |

EXAMINER

DATE CONSIDERED

6-30-03

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

00109692

RECEIVED

Sheet 5 of 6

|   |    |                 |  |                                   |       |                          |                               |
|---|----|-----------------|--|-----------------------------------|-------|--------------------------|-------------------------------|
| Based on Form PTO-1449<br>(3/90)  |    | FEB 06 2003     |  | ATTY. DOCKET NO.<br>670001-2002.4 |       | SERIAL NO.<br>09/804,980 |                               |
| TECH CENTER 1600/2900<br>LIST OF REFERENCES CITED BY APPLICANT<br>(Use several sheets if necessary)   |    |                 |  | APPLICANT<br>ANDERSEN ET AL.      |       |                          |                               |
|   |    |                 |  | FILING DATE<br>March 13, 2001     |       | GROUP<br>1645            |                               |
| U.S. PATENT DOCUMENTS   |    |                 |  |                                   |       |                          |                               |
| EXAMINER<br>INITIAL   |    | DOCUMENT NUMBER | DATE   | NAME                              | CLASS | SUBCLASS                 | FILING DATE<br>IF APPROPRIATE |
|   | AA |                 |  |                                   |       |                          |                               |
| FOREIGN PATENT DOCUMENTS  |    |                 |  |                                   |       |                          |                               |
|   |    | DOCUMENT NUMBER | DATE   | COUNTRY                           | CLASS | SUBCLASS                 | TRANSLATION                   |
|   |    |                 |  |                                   |       |                          | YES NO                        |
|   | AB |                 |  |                                   |       |                          |                               |
| OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)  |    |                 |  |                                   |       |                          |                               |
|   | AC |                 | Man et al. "Treatment of human muscle creatine kinase with glutaraldehyde preferentially increases the immunogenicity of the native conformation and permits production of high-affinity monoclonal antibodies which recognize two distinct surface epitopes", J, Oct. 1, 1989 |                                   |       |                          |                               |
|   | AD |                 | A.B. Andersen et al., MPB64 Possesses Tuberculosis-Complex'-Specific B- and T-Cell Epitopes, Scand J. Immunol 34, 365-372, 1991  |                                   |       |                          |                               |
|   | AE |                 | Anne Worsae et al., Allergenic and Blastogenic Reactivity of Three Antigens from Mycobacterium tuberculosis in Sensitized Guinea Pigs, Infection and Immunity, Dec. 1987, p 2922-2927  |                                   |       |                          |                               |
|   | AF |                 | Yamaguchi Ryugi, et al. "Cloning and Characterization of the Gene for immunogenic Protein MPB64 of Mycobacterium bovis BCG" Infection and Immunity 57(1):283-288 (1989)  |                                   |       |                          |                               |
|   | AG |                 | Wiker, H.G., et al., "A Family of Cross-Reacting Proteins Secreted by Mycobacterium tuberculosis", Scand J. Immunol. 36:307-319 (1992)   |                                   |       |                          |                               |
|   | AH |                 | Leao, S.C., "Tuberculosis: New Strategies for the Development of Diagnostic Tests and Vaccines", Brazilian J. Med. Biol. Res. 26:827-833 (1993)  |                                   |       |                          |                               |
|   | AI |                 | Oettiner, Thomas, et al., "Cloning and B-Cell-Epitope Mapping of MPT64 from Mycobacterium tuberculosis H37Rv", Infection and Immunity 62(5):2058-2064 (1994)   |                                   |       |                          |                               |
|   | AJ |                 | Boswell et al. Computational Molecular Biology, Oxford University Press, pp. 161-178, 1988   |                                   |       |                          |                               |
|   | AK |                 | Flesch and Kaufmann, Mycobacterial Growth Inhibition by Interferon-γ-Activated Bone Marrow Macrophages and Differential ... tuberculosis, The Journal of Immunology, vol. 138, No. 12, pp. 4408-4413, Jun 15, 1987   |                                   |       |                          |                               |
|   | AL |                 | Lefford and McGregor, Immunological Memory in Tuberculosis, Cellular Immunology, vol. 14, pp. 417-428, 1974  |                                   |       |                          |                               |
|   | AM |                 | Orme, Characteristics and Specificity of Acquired Immunologic Memory to Mycobacterium tuberculosis Infection The Journal of Immunology, vol. 140, No. 10, pp.3589-3593, May 15, 1988   |                                   |       |                          |                               |
|   | AN |                 | G.A.W. Rock, The Role of Activated Macrophages in protection and immunopathology in Tuberculosis, Research in Microbiology vol. 141, No. 2, Feb. 1990, pp. 253-256   |                                   |       |                          |                               |
| EXAMINER<br><i>PK Swartz</i>  |    |                 |  | DATE CONSIDERED<br>6-30-03        |       |                          |                               |
| * EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |    |                 |  |                                   |       |                          |                               |

00109692

Based on Form PTO-1449  
(3/90)

ATTY. DOCKET NO.

670001-2002.4

SERIAL NO.

09/804,980

## LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

ANDERSEN ET AL.

FILING DATE

March 13, 2001

GROUP

1645

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|----|-----------------|------|------|-------|----------|-------------------------------|
|                     | AA |                 |      |      |       |          |                               |

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |    |
|--|----|-----------------|------|---------|-------|----------|-------------|----|
|  |    |                 |      |         |       |          | YES         | NO |
|  | AB |                 |      |         |       |          |             |    |

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

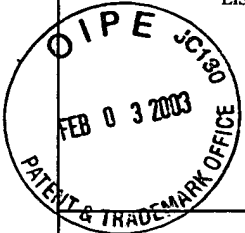
|           |    |  |  |  |  |  |  |  |
|-----------|----|--|--|--|--|--|--|--|
| <i>MS</i> |    |  | Sanger, Nicklen and Coulson, DNA Sequencing with Chain-Terminating Inhibitors, Proc. Natl. Acad. Sci USA, vol. 74, No. 12, pp. 5463-5467, Dec. 1977                                      |  |  |  |  |  |
|           | AC |  | Young, Bloom, Grosskinsky, Ivanyi, Thomas and Davis, Dissection of Myobacterium Tuberculosis antigens Using recombinant DNA, Proc. Natl. Acad. Sci. USA, vol. 82, pp 2583-2587, May 1985 |  |  |  |  |  |
|           | AD |  | Kaufman (Microbiological Sciences 4 (11) Nov. 1987 pp. 324-328)  |  |  |  |  |  |
|           | AE |  | Lazar et al. (Molecular & Cellular Bio. Mar. 1988.pp. 1247-1252)   |  |  |  |  |  |
|           | AF |  | Burgess et al (J. of Cell Biology vol. III Nov. 1990 pp. 2129-2138)  |  |  |  |  |  |
|           | AG |  | Salgaller et al. (Cancer Immuno. Imnuother. (1994) vol. 39 pp. 105-116)  |  |  |  |  |  |
|           | AH |  |  |  |  |  |  |  |
|           | AI |  |  |  |  |  |  |  |
|           | AJ |  |  |  |  |  |  |  |
|           | AK |  |  |  |  |  |  |  |
|           | AL |  |  |  |  |  |  |  |
|           | AM |  |  |  |  |  |  |  |
|           | AN |  |  |  |  |  |  |  |
|           | AO |  |  |  |  |  |  |  |

EXAMINER

DATE CONSIDERED

6-30-03

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



RECEIVED  
FEB 06 2003  
TECH CENTER 1600/2900